

Abstract

The invention relates to a method of avoiding corrosion in the separation of methylamine from a product stream (10) which is obtained in the preparation of methylamines by gas-phase reaction of methanol and ammonia and comprises monomethylamine, dimethylamine, trimethylamine, ammonia and methanol as components, where ammonia is separated off by pure distillation in a first column (1), the remaining components of the product stream obtained as bottoms (12) are fed to a second column (2). Trimethylamine (14) is separated off in the second column (2) by extractive distillation with introduction of water. The further components of the product stream obtained as bottoms (15) from the second column (2) are fed to a third column (3), in which monomethylamine and dimethylamine are separated off at the top. The monomethylamine and dimethylamine are separated by distillation in a fourth column (4). To avoid corrosion alkali metal hydroxide is added to the second or third column (3).

(Figure 1)